

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 December 2004 (29.12.2004)

PCT

(10) International Publication Number  
**WO 2004/114250 A1**

(51) International Patent Classification<sup>7</sup>: **G08G 1/04**,  
1/056, 1/015

(21) International Application Number:  
PCT/GB2004/002676

(22) International Filing Date: 21 June 2004 (21.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0314422.7 20 June 2003 (20.06.2003) GB

(71) Applicant (for all designated States except US): **QINETIQ LIMITED** [GB/GB]; Registered Office, 85 Buckingham Gate, London SW1 6PD (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PARKINSON, Nicholas, James** [GB/GB]; QinetiQ Limited, Malvern Technology Centre, St Andrews Road, Building A412, Malvern, Worcs WR14 3PS (GB). **MANNING, Paul, Antony** [GB/GB]; QinetiQ Limited, Malvern Technology Centre, Building A 303, St Andrews Road, Malvern, Worcs WR14 3PS (GB).

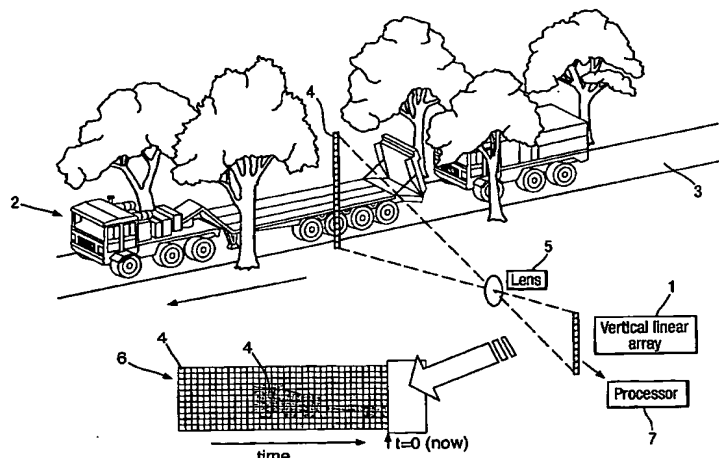
(74) Agent: **BOWDERY, A, O.**; QinetiQ Ltd, IP Formalities, Cody Technology Park, A4 Building, Room G016, Ively Road, Farnborough, Hampshire GU14 0LX (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: IMAGE PROCESSING SYSTEM



(57) Abstract: An image processing system includes a plurality of vertically arranged linear arrays (1 a-d) of detectors imaged onto a plurality of areas (4) in a scene of interest. Horizontal movement of an object (2) through the plurality of areas of interest are detected and fed into a processor (7). The processor may detect object range, direction of movement, speed, true direction of travel, object type. The detectors may be sensitive in the infra red (IR), microwave (including mm wave devices), or visible wavebands, operating with ambient or artificial illumination. In some application a combination of IR and visible detectors may be used. Preferably each detector in the linear array has an associated amplifier and filter. A 360° cover may be obtained by combining several systems into a single unit. The system may be used to detect objects and then control operation of a higher definition two-dimensional detector array and camera (11, 12).

WO 2004/114250 A1



**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*